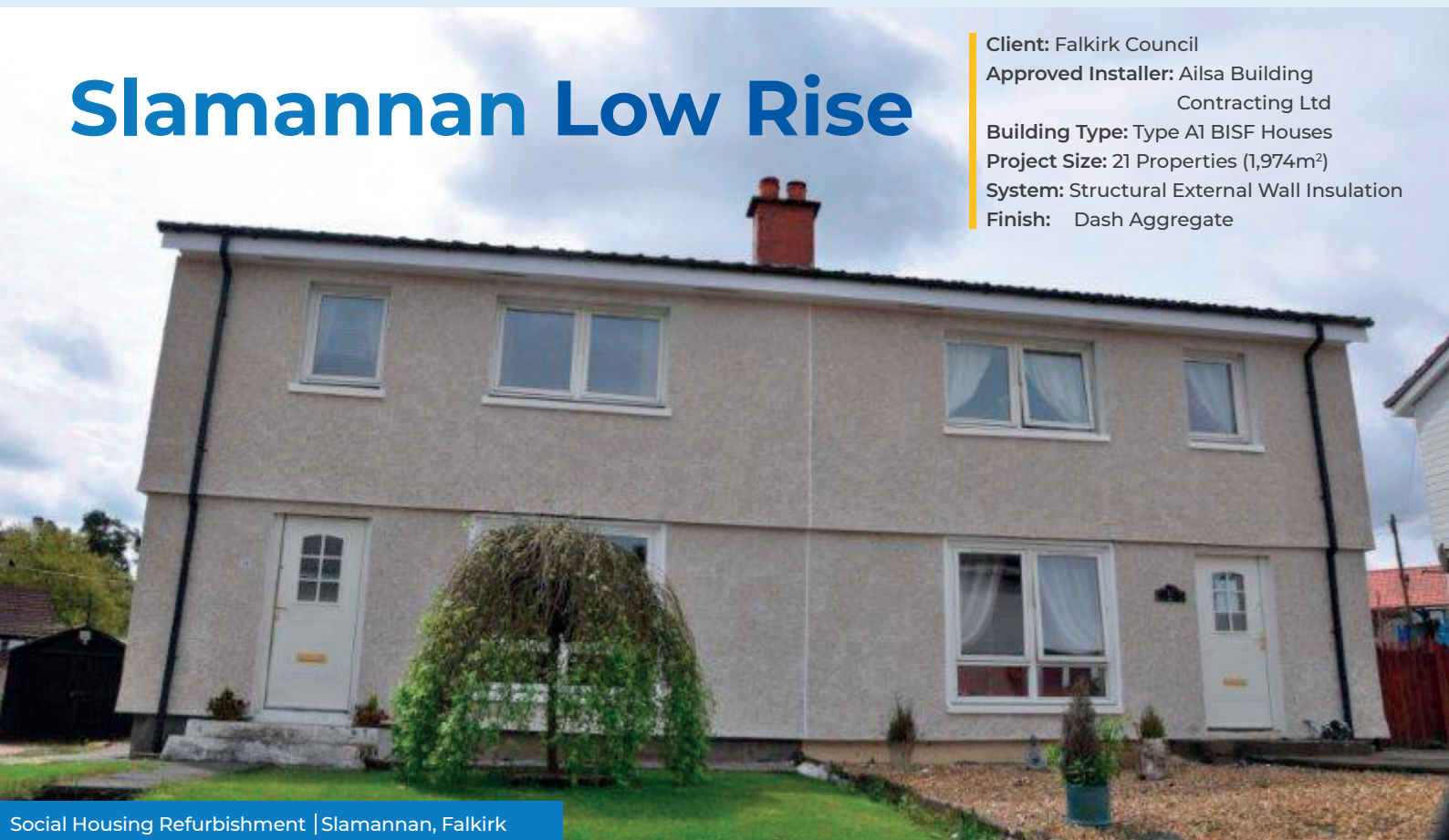




Slamannan Low Rise

Client: Falkirk Council
Approved Installer: Ailsa Building Contracting Ltd
Building Type: Type A1 BISF Houses
Project Size: 21 Properties (1,974m²)
System: Structural External Wall Insulation
Finish: Dash Aggregate



Social Housing Refurbishment | Slamannan, Falkirk

REFURBISHMENT OF NON-TRADITIONAL SOCIAL HOUSING BISF PROPERTIES USING STRUCTURAL EXTERNAL WALL INSULATION

Project Background:

As part of their corporate plan, Falkirk Council has a specific focus on alleviating the causes and affects of poverty and addressing inequalities. Their social housing capital investment fund of £89m includes a proportion for energy efficiency works such as insulation to reduce fuel poverty.

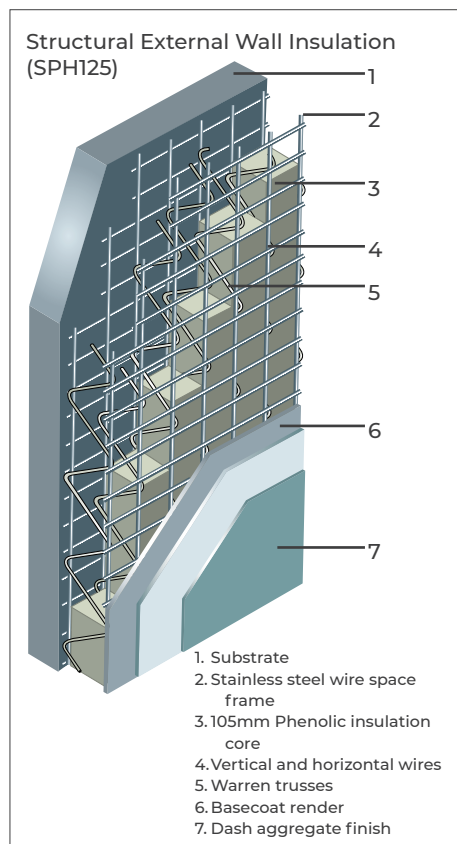
Having used Structherm external wall insulation systems on previous refurbishment projects the council once again specified our Structural External Wall Insulation system for 21 non-traditional BISF properties in the Slamannan area of Falkirk.

Problems:

These non-traditional BISF properties were built in the 1940's using rolled steel channels, angles and joists to form the main load bearing frame. The ground floor external walls were constructed using rendered expanded metal lathing and the first floor walls from vertically profiled steel sheets. A single sheet of plasterboard was used for the inner leaf and in the cavity a small amount of glass fibre insulation was installed.

This type of construction can bring with it many problems such as steel stanchion corrosion, lathing corrosion and subsequent failure of the render and water tightness. Not to mention the poor thermal performance of 1.29W/m²K and the high fuel costs for residents.

UNRIVALLED TECHNICAL SUPPORT AND DESIGN SERVICES WERE PROVIDED AT EVERY STAGE OF THE PROJECT



Client Requirements:

Falkirk Council wanted a cost effective external refurbishment solution that would:

- Overcome the problem of fixing into the weak and failing outer leaf.
- Bring the houses up to current Part L Building Regulation standards in relation to thermal efficiency requirements.
- Improve the external appearance of the houses.

Design Solution:

Falkirk Council appointed Ailsa Building Contracting Ltd as the specialist installer for this project and specified Struchtherm's unique Structural External Wall Insulation (SEWI) system

The SEWI system is based on the performance of a lightweight stainless steel wire space frame with a 105mm Phenolic insulation core. Each SEWI panel measured 1200 x 2400mm and due to their spanning capability were able to be fixed into the steel frame, through the existing cladding, without requiring any fixings going into the weak outer leaf.

The panels were fixed to the steel frame using specially selected fixings and washer plates before being mechanically clipped together to provide a rigid, continuous envelope around the houses.

To complete the system Struchtherm Fibre Reinforced basecoat render 14-16mm thick was applied followed by 8-10mm of dash receiver and a decorative dashing aggregate.

Results:

- SEWI has enabled the houses to be insulated without applying any additional loads to the weak outer leaf.
- Thermal performance has improved greatly with the U value of the walls dropping from 1.29W/m²K to 0.22W/m²K.
- The decorative dashing aggregate has revived the facades of the houses.

